

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Barth Smelting Facility - Removal Polrep
Initial Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: **POLREP #1**
RV3 Initial
Barth Smelting Facility

Newark, NJ
Latitude: 40.7361892 Longitude: -74.1402096

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From: Kimberly Staiger, OSC
Date: 12/13/2013
Reporting Period: 12/04/2013 to 12/13/2013

1. Introduction

1.1 Background

Site Number:	A22L	Contract Number:	EP-S2-10-03
D.O. Number:	076	Action Memo Date:	9/26/2013
Response Authority:	CERCLA	Response Type:	Emergency

Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	12/5/2013	Start Date:	12/4/2013
Demob Date:		Completion Date:	
CERCLIS ID:	NJN008010373	RCRIS ID:	
ERNS No.:		State Notification:	11/25/2013
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Time-Critical Removal Action

1.1.2 Site Description

Barth Smelting Corp. operated on the 99 Chapel Street property, specifically Block 2442, Lots 10, 11, 12, from at least 1946 until the late 1970s, and produced brass and bronze ingots and also worked with non-ferrous metals. Barth was listed as an unrecognized Battery Lead Smelter site with a paper titled "Discovering Unrecognized Lead Smelting Sites by Historical Methods" written by William Eckel et al, and published in the American Journal of Public Health, April 2001.

Prior operators at the 99 Chapel Street property include General Lead Batteries, a manufacturer of lead acid batteries, and the New Jersey Zinc Company, a former zinc smelter. The New Jersey Zinc and Iron Company, also known as the Newark Zinc Works, formerly operated their large facility on the 99 Chapel Street property as well as the property now occupied by the Newark Housing Authority's Terrell Homes. The Zinc Works was one of the first commercial zinc oxide plants in the United States and operated on this location from 1848 to 1910. After the cessation of operations, the New Jersey Zinc & Iron Company buildings were demolished and the property subdivided. In 1946, the Millard E. Terrell Homes, a family development with 275 units, was constructed on one of the parcels of property formerly occupied by the New Jersey Zinc and Iron Company.

1.1.2.1 Location

The Terrell Homes are located in a mixed residential/industrial neighborhood within the Ironbound Section of Newark, Essex County, New Jersey. The property was formerly home to the New Jersey Zinc and Iron Company from 1848 to 1910. The property is bounded to the west by the Passaic River and the Essex County Riverfront Park, to the east by Chapel Street, to the north by the former Barth Smelting Corp. property, and to the west by a large commercial property.

1.1.2.2 Description of Threat

Lead concentrations have been detected exceeding the EPA residential soil screening level of 400 mg/kg within the top two feet of soil at the Terrell Homes housing complex within the grassy area immediately adjacent the Community Building and within the former playground area. The results from lead in the surface soil sampled at 0-1" depth interval ranged from 85 ppm to 9,800 ppm and in the highest concentration of lead detected in soils in the top one inch is 9,800 ppm and in the 1-6" depth interval ranged from 46 to 7,130 ppm.

Direct contact with the elevated levels of lead within the top one inch of soil may occur through common outdoor activities that occur in the play area, or by tracking lead contaminated dirt inside the home. Contact with the lead contaminated soils may present a health risk to residents, particularly young children.

The effects of exposure to lead are the same whether it enters the body through breathing or swallowing. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults to lead has resulted in decreased performance in some tests that measure functions of the nervous system. Lead exposure may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people, and may also cause anemia.

Lead is a cumulative poison where increasing amounts can build up in the body eventually reaching a point where symptoms and disability occur. Particularly sensitive populations are women of child-bearing age, due to the fetal transfer of lead, and children. Cognitive deficits are associated with fetal and childhood exposure to lead. An increase in blood pressure is the most sensitive adverse health effect from lead exposure in adults. Effects on the kidney, nervous system and heme-forming elements are associated with increasing

blood lead concentrations, both in children and adults. Other symptoms include: decreased physical fitness, fatigue, sleep disturbance, aching bones, abdominal pains, and decreased appetite.

The Department of Health and Human Services (DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens based on limited evidence from studies in humans and sufficient evidence from animal studies, and the EPA has determined that lead is a probable human carcinogen.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Soil samples collected from the former playground area of the Terrell Homes on December 3-4, 2012 indicated that elevated levels of lead were found to be present in the surface soils (0 - 2 foot depth interval) of the playground. Additional soil borings were installed throughout the Terrell Homes property from March 29 - April 1, 2013 to determine if historic operations conducted on this property and adjacent properties had impacted the soils. A total of thirty soil borings were installed throughout the property, and each soil boring was completed to a depth of two feet.

Two of the soil borings were installed in a grassy area adjacent the Community Building. The Community Building serves as a recreational area for the residents and contains a water park area (sprinklers) for children to play outdoors and a basketball court. Elevated levels of lead, which pose a significant threat to the local residents, were detected in the grassy area immediately adjacent the water park area.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

An Action Memorandum was signed on September 26, 2013 authorizing EPA to conduct a time-critical removal action to address the threats posed by lead contaminated soil on the Terrell Homes, a residential multi-family public housing complex owned by the Newark Housing Authority.

Soil sampling data has identified this area of the Site to contain elevated levels of lead which poses a significant threat to the residents. The removal action will include the removal of lead contaminated soil within the unpaved play areas located along the northern boundary of the Terrell Homes property and the construction of erosion controls to prevent lead contaminated soil present at the 99 Chapel Street property from migrating onto the adjacent unpaved play areas at the residential property.

This will be the third removal action conducted on this property.

2.1.2 Response Actions to Date

Soil samples collected from the playground area of the Terrell Homes property on December 3-4, 2012 indicated that elevated levels of lead were present in the top two feet of soil in the playground area. EPA mobilized to the Terrell Homes with ERRS on February 21, 2013 to install 6' high temporary chain link fencing around the playground portion of the property restricting access to the lead contaminated soils. Signs were placed on the fencing warning residents to keep out of the fenced off area.

Additional soil sampling performed in March and May 2013 confirmed the presence of elevated concentrations of lead along the northern property line of the Terrell Homes and extending approximately 25 feet onto the unpaved areas of the property. EPA mobilized to the Barth Smelting site with ERRS on May 13, 2013 to install additional 6' high temporary chain link fencing to restrict access to the grassy area adjacent the community building and recreation area within the northern portion of the property. This fencing is an extension of the original temporary fencing. All of the grassy areas along the northern property boundary of Terrell Homes have been fenced off.

EPA mobilized to the Terrell Homes portion of the Barth Smelting site with ERRs on December 4, 2013 to initiate the removal action. RST conducted background dust monitoring before the initiation of soil intrusive work. Removal activities began at the Barth Smelting site on Thursday, December 5th with the removal of trees, shrubs and fencing as necessary for the removal of contaminated soil. A total of ten trees one foot or larger in diameter have been removed from within the excavation area. The excavation of lead contaminated soils and backfilling with clean fill material is expected to be completed by December 20, 2013. The 10' high chain link fencing present along the northern property boundary within the fenced off area was removed on December 6 and December 9, 2013 and has been staged on the 99 Chapel Street property.

Soil excavation was started in the former playground area adjacent Chapel Street on December 11, 2013. The top one foot of soil has been removed from all of the former playground area and most of the grassy area behind the community building.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

PRPs have not been identified to date, but a PRP search will continue.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Lead	Soil	N/A	N/A	N/A	N/A

2.2 Planning Section

2.2.1 Anticipated Activities

Waste removal and backfilling is planned to begin on Monday, December 16, 2013.

2.2.1.1 Planned Response Activities

Restoration of the property, including tree replanting and hydroseeding, is planned for early Spring 2014.

2.2.1.2 Next Steps

- Continue excavation activities
- Transportation and disposal of lead contaminated soil
- Community update documenting EPA activities to be distributed in the community

2.2.2 Issues

The Terrell Homes is located in the Ironbound section of Newark, a recognized Environmental Justice community that has many disadvantages. The Terrell Homes property is a low-income public housing development with 275-units. Occupance of public housing at Newark Housing Authority properties is dictated by income, with preferences for elderly, disabled and DYFS (Division of Youth and Family Services) referrals.

2.3 Logistics Section

Staged on site:

- One excavator
- One track loader
- One Mobile Mini box

2.4 Finance Section

2.4.1 Narrative

Action Memorandum to conduct a time-critical removal action at the Barth Smelting Site was signed on September 26, 2013. This is the third removal action on this Site.

ERRS contractor mobilized to the Site to receive delivery of equipment on December 4, 2013. ERRS mobed at the site to begin removal activities on December 5, 2013. Fencing, trees and shrubs have been removed as necessary for the soil excavation. Excavation activities and T&D to continue next week.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				

ERRS - Cleanup Contractor	\$704,000.00	\$205,605.00	\$498,395.00	70.79%
Intramural Costs				
Total Site Costs	\$704,000.00	\$205,605.00	\$498,395.00	70.79%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

Not Applicable

3. Participating Entities

Newark Housing Authority
Newark Department of Health

4. Personnel On Site

5 ERRS
1 RST
1 EPA

5. Definition of Terms

ERRS - Emergency and Rapid Response Services
RST - Removal Support Team
NHA - Newark Housing Authority
T&D - Transportation and Disposal

6. Additional sources of information

6.1 Internet location of additional information/report

Additional information on the Barth Smelting site can be found at <http://www.epa.gov/region2/superfund/removal/barth/index.html> and at www.epaosc.org/Barthsmelting.

7. Situational Reference Materials

Not applicable